FIG.
16.—C.K.L.C.W., vi, 34.
17.—Y.H.S.K.T.H., p. 6.
18.—C.K.L.C.W., viii, 56.
19.— „ „
20.—Y.H.S.K., iv, 8.
„ v, 20.
„ viii. 12.
21.—C.K.L.C.W., ix, 54.
22.— „ ix, 39.
23.— „ „
24.— „ ix, 11.
25.— „ ix, 12.
26.— „ ix, 10.
27.— „ viii, 24.
28.—S.W.K.C.P., ii, 72.
29.—C.K.L.C.W., vii, 67.
30.— „ vii, 44.
31.— „ vii, 45.
32.— „ vi, 40.
33.—S.W.K.C.P., 2nd ed., xii, 7.
34.—H., 103.
35.— „ 309.
36.—T.Y.T.K., 171.
37.—C.K.L.C.W., ix, 55.
38.— „ ix, 26 (in comp.).
39.— „ „ „
40.—I.S.T.P., vol. xiii, p. 12.
41.—S.W.K.C.P., ii, 46 (in comp.).
42.— „ „ „
43.—I.S.T.P., vol. viii, p. 9, and Tuan Fang, ii, 26.
44.—I.S.T.P., vol. ii, p. 8.
45.—Y.H.S.K., v, 9.
45A.—I.S.T.P., vol. ix, p. 22.
46.—H., 600.
47.—Y.H.S.K., v, 9.
48.—H., 694.
49.—Y.H.S.K., v, 9.

FIG.
50.—Y.H.S.K., v, 9.
51.— „ v, 10.
52.—Tuan Fang, vol. ii, p. 16.
53.—S.W.K.C.P., ii, 88.
54.— „ „
55.— „ „
56.— „ „
57.—Y.H.S.K., iii, 5.
58.— „ „
59.—H., 724.
60.—H., 101.
61.—Y.H.S.K., Hou Pien, 下, p. 1, and II., 547.
62.—Y.K.L.T., Chêng Pien p. 57.
63.—H., ?
64.—S.W.K.C.P., ii, 34.
65.—Tuan Fang, vol. iii, p. 42.
66.—Y.H.S.K., v, 38.
67.—H., 670.
68.—Y.H.S.K., Hou Pien, 下, p. 43.
69.—Y.H.S.K., i, 44.
70.— „ „
71.— „ i, 45.
72.— „ „
73.— „ vi, 44.
74.— „ vi, 43.
75.— „ „
76.— „ v, 28.
77.— „ vi, 44.
78.— „ „
79.— „ „
80.— „ „
81.—*Choyokaku Ji Kan*, i, 9.
82.—I.S.T.P., vol. ii p 15.
83.—Y.H.S.K., ii, 21.
84.— „ iv, 48.
85.— „ vi, 43.

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MISCELLANEOUS COMMUNICATIONS

NOTE ON COL. LORIMER'S PHONETICS OF GILGIT SHINA (*JRAS.* Jan., pp. 1-42; Apr., pp. 177-212)

[Since the following Note was sent to the printer, I have received a letter from Col. Lorimer in reply to one of mine touching *inter alia* on the definition of cerebrals. He writes: "On this definition of cerebral the results of my inquiries essentially agree with yours. The case seems to be the same with aspirates."]

Colonel Lorimer's article is a moral tonic. It is impossible to be a pessimist while there is a scholar who can write in this way. In spite of his experience and careful ear-training he writes with a modesty, which in a tyro would be becoming, and in a scholar is charming. If we owed him nothing else, we should be heavily in his debt for this one fact here clearly set down, that, even for a well-trained ear, to distinguish between cerebrals and non-cerebrals or between aspirated and unaspirated sounds is a matter of extreme if not insuperable difficulty (except for one who has made the distinction from childhood). The present note deals with this difference. In our *Journal* for July, 1921, I stated that Ṣiṇā contained a series of cerebral sounds *ṭ*, *ḍ*, *ṛ*, *ṇ* (*ḷ* in one dialect), *ṣ*, *ẓ*, *c̣*, and *j̣*, marked off from non-cerebrals, and a series of aspirated surds distinguished from non-aspirates; further that *ṭ*, *ḍ*, *ṛ*, *ṇ*, *ḷ* and *ṭh*, *th*, *kh*, *ph*, *ch*, are as distinct from *t*, *d*, *r*, *n*, *l* and *ṭ*, *t*, *k*, *p*, *c* respectively as they are in North India. I still hold this.

We must leave on one side inquiries into such points as the following: (*a*) relative frequency; (*b*) exact place of articulation; (*c*) causes; (*d*) etymology; (*e*) division into primary and secondary; (*f*) importance, for this is only a matter of the meaning of the word "important";

they are neither more nor less important than in Urdu, Panjabi, Hindi, or Bengali; and we must confine ourselves to the inquiry—do the two series exist or do they not? A superficial reading of Colonel Lorimer's article may give the impression that he denies their existence, but if one reads it carefully one sees that his investigations confirm my statements at almost every point.

First a matter of definition. What is a cerebral? The author, modestly mistrusting his own observations, has based all his remarks upon a definition taken from a book on phonetics. Unfortunately the definition is wholly incorrect. It gives the point of articulation as "the highest part of the roof of the mouth about the junction of the hard and soft palates", and tells us that "the tip of the tongue must be firmly pressed" against this place. If this is correct, probably no cerebral is ever heard between Cape Comorin and the Pamirs, either in Ṣiṇā or in any other language. As regards the "firm pressing" it is a sufficient answer to say that the contact of *r* in a word like *ghoṛā* takes less than one-hundredth part of a second; and as regards the place, the proper point of articulation is *anywhere* on the hard palate behind the teeth ridge. When, therefore, Colonel Lorimer says of certain Ṣiṇā sounds that they are not "true cerebrals" or that "they are not rightly described as such", he means merely that they are not cerebrals in the sense of the above definition, and I entirely agree with him. Ṣiṇā certainly contains no such cerebrals, nor does Urdu or Panjabi.

Now two questions emerge: (1) Do Colonel Lorimer's observations support the view of the existence of cerebrals and non-cerebrals, and of aspirated and unaspirated sounds? (2) When he sets himself to make these distinctions is he generally correct? The answer in both cases is an unhesitating affirmative. Let us take them in order. The quotations and page-numbers are from his article.

(1) pp. 17, 18, he gives a list of words with forward *t*, and another with back *t* (i.e. dental and cerebral *ṭ*).

p. 18, "*t* slightly further back than normal . . . the difference is recognized by Shina speakers."

p. 20, "a *d* produced slightly further back than normal," "a decided cerebral *ḍ* exists."

p. 25, "it is possible that *n* is sometimes post-alveolar" (i.e. cerebral).

p. 30, "a sound which on first hearing I mistake for *r*, on examination found to be cerebral *ḍ*." This "mistake" is very creditable to Colonel Lorimer's ear, for it is not a mistake at all. The sound in question is cerebral *ṛ*.

p. 38, "there is a distinct cerebral *ḍ*": (in certain circumstances) "*t*, *d*, *r* are cerebralized and *n* is similarly influenced": (in certain other cases) "*t*, *d*, *r* are post-alveolar or pre-cerebral." As we have seen, these terms are other names for "cerebral".

On p. 188 is a list of words containing cerebral *ṇ*, and on pp. 186, 187 a list of words with cerebral *ḍ*.

The author quotes a competent Ṣiṇ whom he calls S.R. Thus, on p. 210, "S.R.'s *ḍ* sounds to me like English *r*." It is, in fact, *r*, cerebral *r*. Again, "S.R. agrees about (post-alveolar or pre-cerebral) *t*, *r*, *n*": i.e. recognizes cerebral *ṭ*, *ṛ*, *ṇ*. We must again remind ourselves that when Colonel Lorimer says that *t*, *d*, *r*, etc., are post-alveolar or pre-cerebral, he means what we call cerebral. The cerebrals in modern Indian vernaculars are also post-alveolar or pre-cerebral. They are not cerebral in the sense of the definition.

(2) Now we come to aspirates.

p. 196, "the difference between aspirates and non-aspirates is recognized by intelligent Shina speakers, and the difference may constitute the sole difference between similar words."

On pp. 198, 199, is a list of words containing aspirated and unaspirated plosives respectively.

p. 207, "factors important in distinguishing words (otherwise) identical are . . . aspiration."

p. 211, "S.R. is pretty clear in his own mind as to what are and what are not aspirates."

Let us now examine the author's lists of words containing cerebrals, non-cerebrals, aspirates, and non-aspirates. On pp. 17, 18, words with dental or cerebral *t*. The distinction has been made with absolute correctness.

p. 20, a list of post-alveolar (i.e. cerebral) *d*'s—perfectly correct, except that perhaps by a clerical slip, the two words dam and ḍam are interchanged. As printed the words are ḍam be, all together, and du dam, twice. The first should be dam, and the second ḍam.

pp. 186, 187, a list of words with cerebral *ḷ*, said to be "much more akin to *r*". As stated above it *is* cerebral *r*. In this Colonel Lorimer's ear guided him aright. All the words in the list do actually contain either *r* or (in two or three cases) *ḷ*.

p. 188, a list of words with cerebral *ṇ*—correct.

pp. 198, 199, long lists of aspirates and non-aspirates. I agree with all but two or three.

We may conclude that in the author's opinion—

(i) Ṣiṇā (besides *d*, *t*, *n*, *r*) contains cerebral *ḍ*, *ṭ*, *ṇ* (what he calls post-alveolar or pre-cerebral), and in addition another cerebral *ḷ*, "much more akin to *r*," i.e. cerebral *r*.

(ii) The distinction between aspirates and non-aspirates is recognized by S.R. and other Ṣiṇā speakers;

and further that—

(iii) when Colonel Lorimer prepares special lists of words to indicate the distinctions nearly all his words are correctly chosen. I think I could hardly have asked for a fuller endorsement of my judgment in the matter.

On p. 191 the author suggests that on "so simple a phonetic matter" as cerebrals I would claim that I was "not likely to be mistaken". This is an important point of principle. I should reply: No, on the contrary I should like every language scholar to keep before him on his desk the following words printed in large and clear letters: "Sounds to which you have not been accustomed all your life you will probably never be able to recognize clearly or produce correctly. If there is an exception it will only be the result of prolonged phonetic study and almost superhuman effort." Now it is quite true that I have no difficulty in recognizing these cerebrals and in distinguishing aspirates, but it is not because they are *per se* "easy phonetic matters"; the reason is that I was born among them and have used them all my life. I cannot recall a time when they were not perfectly familiar to me.

T. Grahame Bailey.

BEKANATA AND BIKANER

In the *Cambridge History of India*, vol. i, p. 87 (in chap. iv, "The Age of the Rigveda," by Professor A. B. Keith), occurs this sentence: "The term Bekaṇāta, which occurs along with Paṇi in one passage, has been thought to be a reference to some Babylonian word: though the Indian Bikaner is much more plausible as its origin." The suggested survival of the intervocalic *k* from Vedic times would be remarkable, and, looking at the equation from the phonetic point of view, one naturally asks for some evidence in support of it.

The references will be found under Bekanāta in the Vedic Index (Macdonell and Keith).

Hopkins (*JAOS.*, vol. xvii, p. 44) suggested some connexion with a word *baqatum* in an Assyrian inscription. The meaning of this word was not exactly known, but appeared to relate to debt. Hillebrandt (*Ved. Myth.*, vol. iii, p. 268, n. 1) instances as one of the few points in which he thinks Brunnhofer was correct his identification of Bekanāta with Bikaner. The Vedic Index notes that the word might just as well be aboriginal as Babylonian. Now the state and town of Bikaner were founded in the fifteenth century A.D. by Rāo Bīka (1465–1504), a Rathor Rājpūt, the son of Rāo Jodha, who founded Jodhpur. (*Imperial Gazetteer* under "Bikaner"; Tod's *Annals and Antiquities of Rajasthan*; Crooke's ed., vol. ii, p. 1123.)